

## METHOD AND APPARATUS FOR MANAGING TEMPERATURE IN A PATIENT

## ABSTRACT OF THE DISCLOSURE

5 A fluid transfer assembly includes a fluid carrier and a heat exchange assembly  
coupled to the fluid carrier. The heat exchange assembly includes a heat exchange  
conduit, a heat exchanger in thermal communication with the heat exchange conduit,  
and a pump. The pump defines a stroke volume that is greater than a fluid carrier  
volume defined by the fluid carrier. The configuration of the stroke volume of the pump  
and the fluid carrier volume of the fluid carrier limits the length of the fluid carrier. In  
10 such a configuration, the heat exchange assembly orients in proximity to the body  
during operation to create a relatively short *ex vivo* flow path between a body and the  
heat exchange assembly. During operation, as the fluid flows along the *ex vivo* flow  
path, the relatively short *ex vivo* flow path minimizes thermal change in the fluid caused  
by a heat exchange between the walls of the fluid carrier and the atmosphere.

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